

AMERICAN CYANAMID COMPANY

1937 WEST MAIN STREET

STAMFORD, CONN.



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August 1, 1946

Mr. Joshua Lederberg
Yale University
Osborn Botanical Laboratory
New Haven, Connecticut

Dear Lederberg:

Your results on the PAB mutant strains are similar to ours and it would be interesting to compare the strains in detail. I am sending under separate cover cultures of our three PAB-requiring strains.

These cultures gave negative tests for syntrophism. Strain 1861-460 can substitute a mixture of amino acids and a purine for PAB while strains 273-384 and 45-462 require thymine in addition. Lampen has found that of the amino acids methionine is essential but gives only light growth alone.

I have carried out one experiment with the lysine strain since you were here. It appears that a single colony culture of this strain contains a few cells (isolated by plating with synthetic media-agar) which grow slowly with methionine and at a normal rate with methionine + lysine but fail to grow with lysine alone. We reported in our first paper that the original culture of this strain occasionally grew with methionine or thiamine. I doubt if we shall do much more with the lysine strain and can probably send you a culture in a week or two. We have observed similar changes in several other strains but they may well be the result of contaminations.

With regard to the uracil-citrulline strain, the double requirement may be the result of an inhibition by a precursor of uracil but we are unable to reach a definite conclusion. If an inhibition is involved it must be essentially irreversible or non-competitive.

Sincerely,

AMERICAN CYANAMID COMPANY

Ray.

Raymond R. Roepke

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